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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,577	10/17/2003	Junichi Hayashi	00862.023286	8946
5514 7590 07/13/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER MORAN, RANDAL D	
			ART UNIT 2135	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/686,577	Applicant(s) HAYASHI, JUNICHI	
	Examiner Randal D. Moran	Art Unit 2135	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claims 1, 3-16 are pending in this application. Claim 2 was canceled in an amendment filed 5/25/2007.

### *Claim Objections*

1. **Claim 9** is objected to because of the following informalities: "Ascending" was not properly removed from the claim. "Ascending descending" in line 9 is unclear.

Appropriate correction is required.

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 13-16** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-16 of copending **Application No.10/686579**. Although the conflicting claims are not identical, they are not patentably distinct from each other because "arranging the partial encoded data that constitute encoded data of a tile, arranging the partial encoded data toward a terminal in descending order" is already suggested in the storing of images in a hierarchical tree that repeatedly uses adjacent tiles to form tile groups creating the tree. Using adjacent tiles to form the tree would require that the tree be formed in an order of descending priority.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 101***

1. The rejection of **Claims 7, 8, 11, 12, and 15** under 35 U.S.C. 101 is withdrawn in view of the amendment filed 5/25/2007.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kimizuka et al. (US 2002/0171743)**, hereafter "Kimizuka", in view of **Ishiguro (US 5,796,839)**, hereafter "Ishiguro."

3. Considering **Claims 1 and 6-8**, Kimizuka discloses an information processing method of receiving encoded image data compression-coded for each tile ([0012]), characterized by comprising: repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups ([0048]-[0050], Fig. 3) so as to define a hierarchical structure of groups ([0070], Fig. 8), dividing encoded data of a tile located at a terminal of the hierarchical structure into a plurality of partially encoded data regarding resolution or quality ([0057], [0060]) and arranging the partial encoded data toward the terminal in descending order based on the resolution or quality so that partial encoded data of lowest resolution or lowest quality is arranged at the terminal of the hierarchical structure ([0060], [0070], Fig. 8), thereby defining a

tree structure that has as nodes the respective tile groups, the respective tiles, and the respective partial encoded data ([0070], Fig 8(B)).

Kimizuka does not explicitly disclose encrypting the encoded image data, generating encryption key information for a node located at an uppermost layer of the tree structure, executing, up to a node located at the terminal, processing for generating encryption key information for a node of interest on the basis of encryption key information generated for a node located at an upper layer and a one-way function, so as to generate the encryption key information for each node; designating in the tree structure, a desired node among the plurality of partial encoded data; setting as an object to be encrypted, partial encoded data designated in said designating step and partial encoded data at a higher layer than the layer of the designated partial encoded data; and encrypting each partial encoded data set in said setting step using the generated encryption key information corresponding to each node.

Ishiguro discloses encrypting the encoded image data (column 1- lines 24-33), generating encryption key information for a node located at an uppermost layer of the tree structure (column 9- lines 45-48), executing, up to a node located at the terminal, processing for generating encryption key information for a node of interest on the basis of encryption key information generated for a node located at an upper layer (column 3- lines 30-39, column 4- lines 60-67, column 5- lines

1-13), and a one-way function, so as to generate the encryption key information for each node (column 4- lines 25-34); designating in the tree structure, a desired node among the plurality of partial encoded data (column 5- lines 42-53); setting as an object to be encrypted (column 5- lines 20-29), partial encoded data designated in said designating step and partial encoded data at a higher layer than the layer of the designated partial encoded data (column 4- lines 60-67, column 5- lines 1-13); and encrypting each partial encoded data set in said setting step using the generated encryption key information corresponding to each node (column 5- lines 20-29 and 42-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Kimizuka by the key management system and encryption techniques as taught by Ishiguro for the benefit of managing encryption keys with ease by hierarchically managing encryption keys (Ishiguro- column 2- lines 10-11). Effective management of encryption keys provides for the prevention of illegal use of software or data recorded on a recording medium such as a digital video disk or software or data supplied through a network (Ishiguro- column 1- lines 19-22).

4. Considering **Claim 3**, the combination of Kimizuka and Ishiguro discloses the function generates the key information by using coordinate position information of

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a tile group, a tile, or partial encoded data located at the lower layer (Kimizuka- [0011]-[0013], [0057], Fig. 6).

5. Considering **Claim 4**, the combination of Kimizuka and Ishiguro discloses the encryption key information of the uppermost layer is output to a predetermined authentication server on the Internet (Ishiguro- column 4- lines 43-52).
6. Considering **Claim 5**, the combination of Kimizuka and Ishiguro discloses a step of displaying the received encoded data as a hierarchical structure of tiles, tile groups, and partial encoded data, and the desired partial encoded data of the desired layer is designated from the hierarchical structure displayed in the display step (Ishiguro- column 7- lines 24-33)
7. Considering **Claims 9-12**, the combination of Kimizuka and Ishiguro discloses an information processing method of receiving information containing encoded data of both encrypted and unencrypted tiles and reproducing an image (Kimizuka- [0089], [0090], Ishiguro- column 4- lines 60-67, column 5- lines 1-13), characterized by comprising: repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from a plurality of adjacent tile groups on the basis of the received information so as to define a hierarchical structure of the tile groups (Kimizuka- [0048]-[0050], Fig. 3), dividing encoded data of a tile located at a terminal of the hierarchical structure into a plurality of partial encoded data



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regarding resolution or quality (Kimizuka- [0057], [0060]), and arranging the partial encoded data toward the terminal in descending order based on the resolution or quality so that partial encoded data of lowest resolution or lowest quality is arranged at the terminal of the hierarchical structure (Kimizuka- [0060], [0070], Fig. 8), thereby defining a tree structure that has as nodes the respective tile groups, the respective tiles, and the respective partial encoded data (Kimizuka- [0070], Fig 8(B)); receiving key information to be used to decrypt a tile containing encrypted partial encoded data (Ishiguro- column 2- lines 16-17); sequentially generating key information up to desired partial encoded data located at a lower layer of a tile of interest on the basis of the received key information of the tile and a one-way function (Ishiguro- column 4- lines 60-67, column 5- lines 1-13), so as to generate the key information for each node (Ishiguro- column 4- lines 25-34); and decrypting each encrypted partial encoded data by using the key information generated for each partial encoded data (Ishiguro- column 8- lines 1-5).

8. Considering **Claims 13-16**, the combination of Kimizuka and Ishiguro discloses a processing method of a server which is connected to a network for providing a decryption key for an image containing encoded data of both encrypted and unencrypted tiles (Ishiguro- column 9- lines 29-35), characterized by comprising: for a plurality of partial encoded data that constitute encoded data of a tile,

arranging the partial encoded data toward a terminal in order based on the resolution or quality so that the lowest resolution or lowest quality is arranged at the terminal of the hierarchical structure (Kimizuka- [0060], [0070], Fig. 8), and storing basic decryption key information located at an uppermost layer of the image which has the hierarchical structure (Ishiguro- column 6- lines 30-34) constructed by repeatedly forming one tile group from a plurality of adjacent tiles and another tile group from adjacent tile groups (Kimizuka- [0048]-[0050], Fig. 3); and when information that designates partial encoded data to be decrypted is received from a client on the network (Ishiguro- column 7- lines 24-38), sequentially deriving, using a one-way function (Ishiguro- column 4- lines 25-34), decryption key information from the basic decryption key to a lower layer until reaching the designated partial encoded data of the designated layer and (Ishiguro- column 4- lines 60-67, column 5- lines 1-13), when decryption key information for the corresponding partial encoded data is generated, notifying the client of the decryption key information (Ishiguro- column 10- lines 29-36).

### ***Response to Arguments***

1. Applicant's arguments with respect to **Claim 1** have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

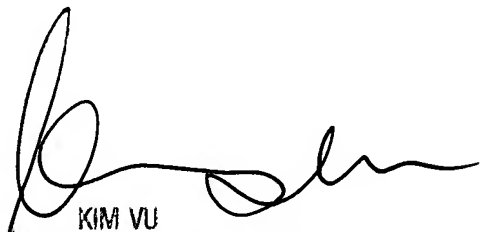
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Randal D. Moran  
/RDM/

6/25/07



KIM VU  
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